

Date: Monday, 12/01/2009 2:38:13 PM
User: Julie Dawson

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : STUD
Job Number : 44685	
Estimate Number : 13166	
P.O. Number :	Part Number : D36885
This Issue : 12/01/2009 S.O. No. :	Drawing Number : D3688 REV B
Prsht Rev. : NC	Project Number : N/A
First Issue : / / Type : MACHINED PARTS	Drawing Revision : B
Previous Run : 37295	Material :
Written By :	Due Date : 23/02/2009 Qty: 6 Um: Each
Checked & Approved By : <u>JUD 09.01.13</u>	
Comment : Rev:A New Issue 08-01-29 JLM Verified By:EC Est Rev:B Material Change 09-01-07 JLM Verified By:EC	

Additional Product

Job Number:



Seq. #:

Machine Or Operation:

Description :

1.0

M174PHH900R1000

17-4PH SS ROUND BAR 1.00 COND.900



Comment: Qty.: 1.1414 f(s)/Unit Total: 6.8481 f(s)
17-4PH SS ROUND BAR 1.00 ***CONDITION H900****
BATCH: M110540

SA 02/01/21

2.0

BAND SAW

BAND SAW



Comment: BAND SAW
Cut blank 12.020" long

SA 09/01/21

3.0

DOOSAN LATHE

DOOSAN LATHE



Comment: DOOSAN LATHE
1-Turn as per Folio FA719 Rev: 1/4 & Dwg D3688 Rev: 1

2-Deburr per dwg D3688

SA 09/01/22

F10

4.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

SA 09/01/22

6

5.0

LATHE CONV.

CONVENTIONAL LATHE



Comment: CONVENTIONAL LATHE
Face to finished length as per dwg D3688 AND center drill as per Dwg D3688

SA 09/01/22

6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3688-5 PAR #: N/A Fault Category: Prod. Eng. Coord NCR: (Yes) No DQA: A Date: 09.01.29
 Resolution: D3684-045 Scrap Disposition: Scrap QA: N/C Closed: D Date: 09/02/02

NCR: <u>44685</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>09/01/22</u>	<u>7.0</u>	<u>1 part scrap.</u> <u>Program error, taper</u> <u>was too high up on the part.</u> <u>R.C. program error.</u>	<u>[Signature]</u>	<u>- Prog. Fixed.</u> <u>scrap: replace Q141</u>	<u>SD</u> <u>09/01/22</u>	<u>[Signature]</u> <u>09/01/23</u>	<u>[Signature]</u> <u>09/01/22</u>	<u>[Signature]</u> <u>09-01-23</u>

NOTE: Date & initial all entries

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STUD

Job Number: 44685

Part Number: D36885

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

SD 09/01/22

(6)

7.0

DOOSAN LATHE

DOOSAN LATHE



Comment: Doosan Lathe

1- Turn as per Folio FA719 Rev: N/A & Dwg D3688 Rev: B

2-Deburr per dwg D3688

SD 09/01/22

(6)

8.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

SD 09/01/22

(6)

9.0

QC8

SECOND CHECK



Comment: SECOND CHECK

SD 09/01/23

(6)

10.0

PG

PURCHASING



Comment: PURCHASING

Issue P/O: 0084

LPI Per ASTM 1417 LEVEL 2

Certificate of conformaty is required

JUD 09/01/23

(6)

11.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage

Ensure certificate of conformity is attached

Pd 09/01/28

(6)

12.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

SD 09/01/28

(6)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 12/01/2009 2:38:13 PM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STUD

Job Number: 44685

Part Number: D36885

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

9/1/28

14.0

QC21

FINAL INSPECTION/W/O RELEASE



09/01/29

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



MF 09-01-28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 44685
Description: SIND		Part Number: 3688-5
Inspection Dwg:	Rev: 13	Page 1 of 1

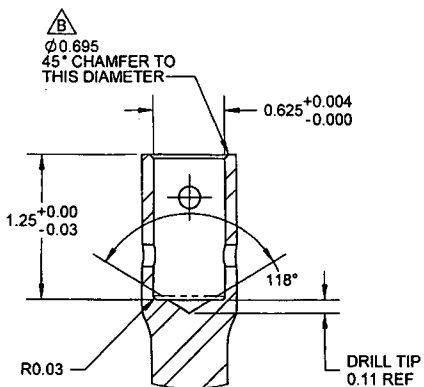
FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

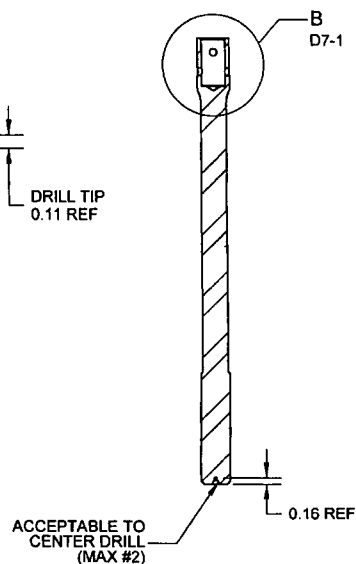
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.25	+0.000 -0.03	1.234	/			
.625	+0.004 -0.002	.629	/			
Ø.825	+0.006 -0.011	Ø.827	/			
Ø.189	+0.008 -0.001	Ø.189	/			
Ø.659	+0.000 -0.015	Ø.653	/			
11.920	+0.015 -0.015	11.917	/			
2.90	±0.030					
2.90	+0.030	2.90	/			
Major Ø	Min. .7391 Max. .7485	.747	/			
MOW	Min. .7687 Max. .7737	.772	/			
.370	+0.000 -0.010	.360	/			
.870	+0.000 -0.010	.862	/			
R.25	±0.30	R.25	/			
R.50	±0.30	R.50	/			

Measured by: SD	Audited by: [Signature]	Prototype Approval: N/A
Date: 05/01/22	Date: 09/01/23	Date: N/A

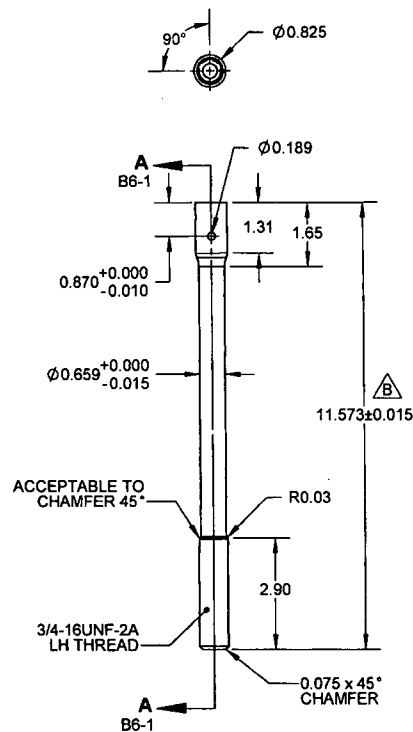
Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	



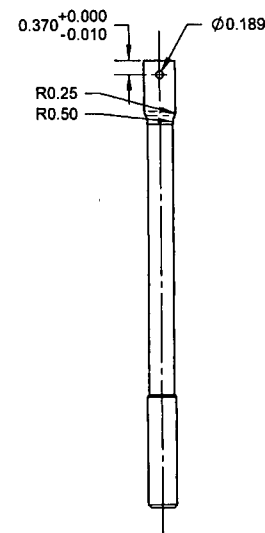
DETAIL B
SCALE 3X
D6-1



SECTION A-A
D4-1



D3688-1 STUD



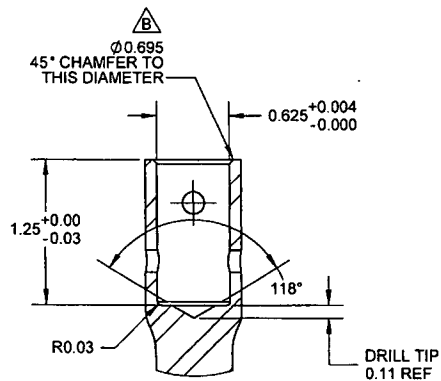
RELEASED
08/12/15

- NOTES:**
- 1) MATERIAL: 17-4PH STAINLESS STEEL ROUND BAR PER AMS 5643 H-900 CONDITION
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 1.24 lb
 - 8) LPI PER ASTM 1417 LEVEL 2

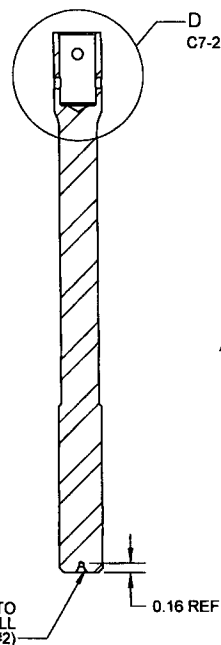
B	CHANGE TO 17-4PH H-900 (ZN A8-1, A8-2, A8-3, A4-4); REDUCE LENGTH ON D3688-1 FROM 12.073 TO 11.573 (ZN C3-1) BASED ON PROTOTYPE INSTALL; 0.695 WAS 0.665 (ZN D8-1, D8-2, D8-3); 0.508 WAS 0.478 (ZN D8- 4); REFORMATTED TO CURRENT DWG STANDARDS	RF	08.11.24
A	NEW ISSUE	RF	08.05.22
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D3688 TITLE STUD COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DRAWN	RF		
CHECKED	47		
MFG. APPR.	21		
APPROVED	21		
DE APPR.	21		
DATE	08.11.24		

SHOP COPY
RETURN TO
ENGINEERING
CONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
41685

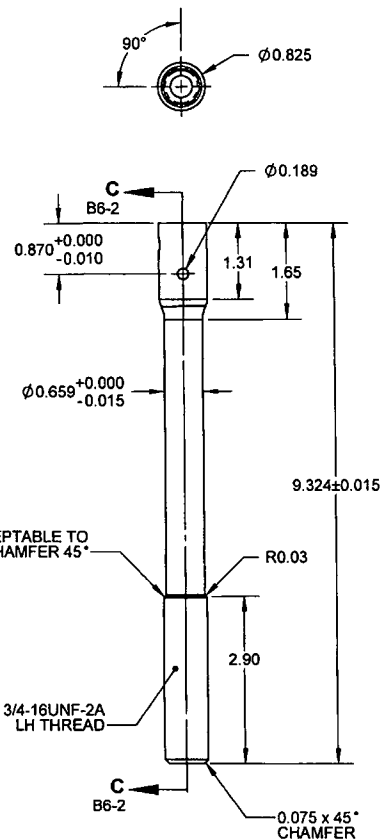
8 7 6 5 4 3 2 1



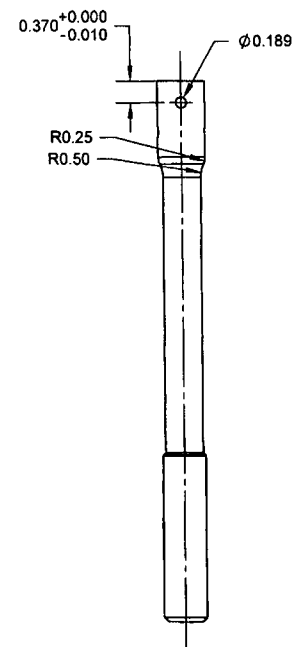
DETAIL D
SCALE 2X
D6-2



SECTION C-C
D4-2



D3688-3 STUD

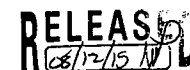


RELEASED
08/12/19

- NOTES:**
- 1) MATERIAL: 17-4PH STAINLESS STEEL ROUND BAR PER AMS 5643 H-900 CONDITION
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 0.97 lb
 - 8) LPI PER ASTM 1417 LEVEL 2

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>RF</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>RF</i>	D3688	SHEET 2 OF 4
APPROVED	<i>RF</i>	TITLE	SCALE
DE APPR.	<i>RF</i>	STUD	NTS
DATE	08.11.24	COPYRIGHT © 2008 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

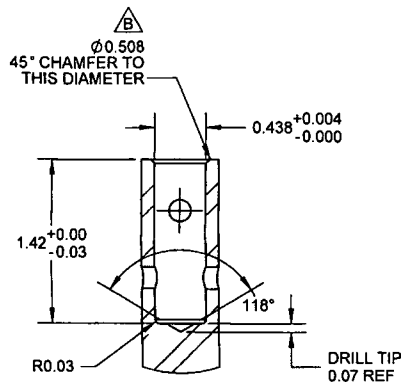
NO 141085
UNCONTROLLED COPY
SUBJECT TO RECALL
RETURN TO
SHIP COPY
REWORK TO
ENGINEERING



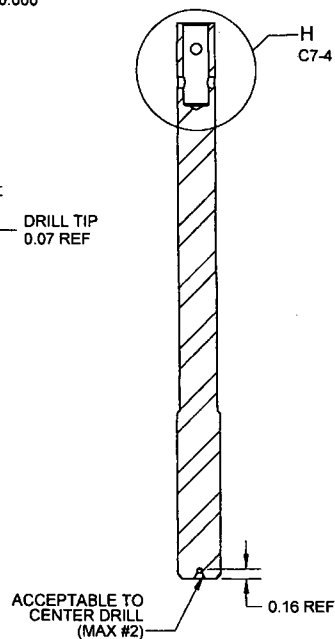
- NO. 44685

334

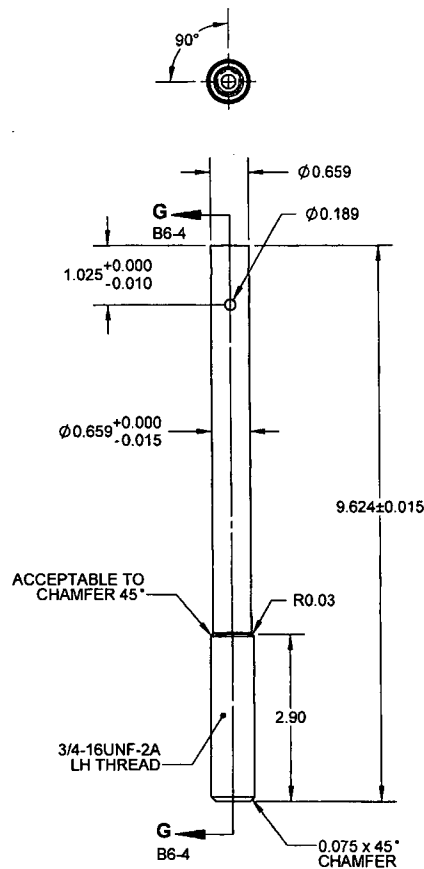
10.270
10.610



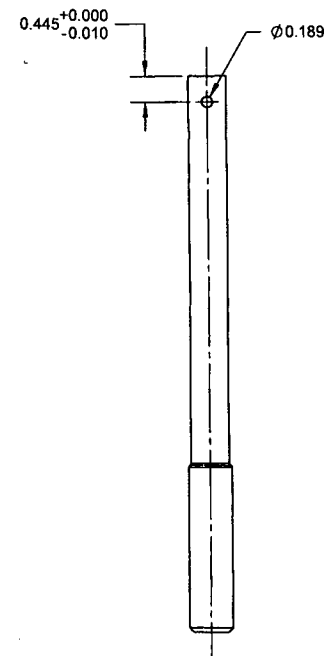
DETAIL H
SCALE 2X
D8-4



SECTION G-G
D4-4



D3688-7 STUD



RELEASED
08/12/15

- NOTES:**
- 1) MATERIAL: 17-4PH STAINLESS STEEL ROUND BAR PER AMS 5643 H-900 CONDITION
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 0.97 lb
 - 8) LPI PER ASTM 1417 LEVEL 2

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO. D3688	REV. B
MFG. APPR.	<i>[Signature]</i>	SHEET 4 OF 4	
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	STUD	NTS
DATE	08.11.24	<small>COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

NO. 141085
W901288
WITH OUT NOTICE
SUBJECT TO AN ENDMENT
COPY
RETURN TO
ENGINEERING
CONTROL ROLLED COPY



LIQUID PENETRANT TEST REPORT

P- 14931

PAGE 1 OF 1

CLIENT	DART AEROSPACE	DATE	JAN-28-2009	TIME	AM <input checked="" type="checkbox"/> PM <input type="checkbox"/>
ATTENTION	LINDA	ACUREN JOB NO.	188-09-001282		
ADDRESS	1270 ABERDEEN ST HAWKES BURY, ONT. K6A-1K7	PO/VO NO.	8089		
		WORK LOCATION	MAN SHOP - HAWKESBURY		
		ACCEPTANCE STD.	ASTM 1417	REV./DATE	2007
PROJECT	F.P.I on MACHINED PARTS AND CROSS TUBES.				
ITEM(S) EXAMINED	42 MACHINED PIECES. 3 CROSS TUBES 100% EXTERNAL AND ONE CROSS TUBE REEXAMINE				

JOB DESCRIPTION	PROCEDURE NO. LT-XXXX	REV./DATE	TECHNIQUE NO. LT-XXXX-XXX	REV./DATE
PART NO.	MATERIAL		ALODINED ALUM THICKNESS	
SCOPE	WET FLUORESCENT LIQUID PENETRANT INSPECTION CARRIED OUT ON 100% EXTERNAL.			

TEST DETAILS	
METHOD <input checked="" type="checkbox"/> FLUORESCENT <input type="checkbox"/> VISIBLE	<input checked="" type="checkbox"/> WATER WASH <input type="checkbox"/> SOLVENT REMOVABLE <input type="checkbox"/> POST EMULSIFIED
FAMILY BRAND MAGNAFLUX	BLACK LIGHT S/N 8171 <input type="checkbox"/> OUTPUT > 1000 μ W/CM ² <input type="checkbox"/> AMBIENT < 2 fc
PENETRANT ZL 67 MINIMUM DWELL TIME 5-10 MIN.	LIGHTING EQUIP. <input type="checkbox"/> FLASHLIGHT <input type="checkbox"/> TROUBLELIGHT <input type="checkbox"/> OUTPUT > 100 fc @ SURFACE
PENETRANT REMOVER H2O MINIMUM DRY TIME > 10 MIN.	OTHER
DEVELOPER SKD 52 MINIMUM DWELL TIME 10 MIN.	LIGHT METER S/N
DEVELOPER TYPE <input checked="" type="checkbox"/> NON AQUEOUS <input type="checkbox"/> AQUEOUS <input type="checkbox"/> DRY	CAL DUE DATE FEB-09

TEST SURFACE	
SURFACE CONDITION <input type="checkbox"/> AS GROUND <input type="checkbox"/> AS WELDED <input type="checkbox"/> MACHINED <input type="checkbox"/> SHOT BLASTED <input checked="" type="checkbox"/> CLEAN BARE METAL	
SURFACE TEMPERATURE <input type="checkbox"/> < - 4°C/ 20°F <input type="checkbox"/> - 4°C/ 20°F TO 10°C/50°F <input type="checkbox"/> 10°C/50°F TO 52°C/125°F <input type="checkbox"/> > 52°C/125°F	

RESULTS- (<input type="checkbox"/> METRIC <input type="checkbox"/> IMPERIAL)			
ITEM	COMMENTS	ACCEPT	REJECT
1	JB# 44214	✓	
1	45066	✓	
1	44215	✓	
1	44944	✓	
2	45299	✓	
10	44824	✓	
6	44687	✓	
2	45297	✓	
10	44823	✓	
6	44686	✓	
6	44685	✓	
		ALL ITEMS FOUND ACCEPTABLE FOR JOB# NOTED	

Scope of Services
The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES	
CLIENT REPRESENTATIVE	DTR #
TECHNICIAN (SIGNATURE):	REPORT REVIEWED BY:
NAME (PRINT):	NAME INITIALS
CGSB LEVEL # SNT LEVEL	CGSB LEVEL SNT LEVEL
CGSB REG. NO. 6066	CGSB REG. NO.